

Notice of Allowability

Application No.

10/648,438

Examiner

Tom V. Sheng

Applicant(s)

MORII, HIDEKI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 3/12/2007.
2. ☒ The allowed claim(s) is/are 1-9,11 and 12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Election/Restrictions

1. Claims 1, 9, 11 and 12 are allowable. The restriction requirement among species 1-6, as set forth in the Office action mailed on 3/28/2006, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claims 4-8 are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim. However, claim 10, directed to species 5, is withdrawn from consideration because the subject matter does not require all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Andrew Waxman on 6/1/07.

The application has been amended as follows:

Claim 1, line 22, replace "generate" with --generated--.

Cancel claim 10.

Allowable Subject Matter

3. Claims 1-9, 11 and 12 are allowed.

4. The following is an examiner's statement of reasons for allowance:

The invention is directed to a display device, during a period before the start of outputting display data of a first row from a source driver, a timing control ASIC generates a gate start pulse signal GSP and a first pulse CK1 of a gate clock signal GCK, with reference to the timing of inputting a data enable signal ENAB. The signals are supplied to the gate driver so that dummy gate line G0 is driven.

Independent claims 1, 11 identify, inter alia, the uniquely distinct features, "the control device generates the row drive timing signal with reference to a timing of inputting the data enable signal and supplies the row drive timing signal, which has been generated, to the row drive circuit, so that one of the row drive signals is supplied to a first output terminal of the row drive circuit during a period from the timing of inputting the data enable signal to a start of the column drive circuit outputting the

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column drive signals of a first horizontal period of one vertical period, and the row drive timing signal includes: a pulse shifted start pulse signal for determining timings to serially output the row drive signals to respective row lines; and a shift clock signal for determining a timing to shift the start pulse signal.”

Independent claim 9 identifies, inter alia, the uniquely distinct features, “a shift clock signal generation section which generates a first clock of a shift clock signal which determines a timing to shift the start pulse signal, when a predetermined number of clocks of the clock signal is counted from the timing of inputting the data enable signal, wherein the row drive circuit obtains the start pulse signal in accordance with the first clock of the shift clock signal, so as to cause one of the row drive signals to be outputted to a first output terminal.”

Independent claim 12 identifies, inter alia, the uniquely distinct features, “the row drive timing signal is generated with reference to a timing of inputting the data enable signal and supplied to the row drive circuit, so that one of the row drive signals is supplied to a first output terminal of the row drive circuit during a period from the timing of inputting the data enable signal to a start of the column drive circuit outputting the column drive signals of a first horizontal period of one vertical period; and the row drive timing signal includes: a pulse shifted start pulse signal for determining timings to serially output the row drive signals to respective row lines; and a shift clock signal for determining a timing to shift the start pulse signal.”

Park (US 2002/0033787 A1) teaches a liquid crystal display with a dummy first gate line such that all the storage capacitors of the pixels have the same charging

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characteristics to ensure a uniform brightness in display. Specifically, Park teaches that, it is preferable to provide a dummy gate signal (A) preceding the first gate signal on gate line G1. Park further teaches a dummy gate signal producing circuit that receives a vertical synchronizing signal (VS) and a data enable signal (DE) to produce the dummy gate signal preceding the first gate signal.

This is, however, different from the application's use of a start pulse signal (GSP) and a shift clock signal (GCK) in generating a row drive signal to a first output terminal (i.e. a dummy gate drive signal on a dummy gate line) of the row drive circuit. In fact, Park's GSP is generated after the dummy gate signal (A) instead. Similarly, Park does not teach using a first clock of the shift clock signal, to obtain the start pulse signal, that result in a row drive signal to the first output terminal of the row drive circuit.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

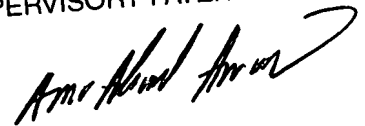
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tom Sheng

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "Amir A. Awad", is written over the printed name and title.